

Observations made at the U.S. Naval Observatory, Washington.

By Professor A. Hall, U.S.N.

*(Communicated by Commodore Geo. E. Belknap, U.S.N., Superintendent.)**Conjunctions of the Satellites of Saturn.*

<i>Mimas.</i>				
Date.	Wash. M.T. h m	Pos.	Wt.	Remarks.
1886, Jan. 7	8 57.5	N .	3	Excessively faint
Feb. 9	8 23.3	N	3	A little doubtful
<i>Enceladus.</i>				
1885, Dec. 26	9 46.3	N	1	Very faint
1886, Feb. 23	7 34.3	N	3	
Mar. 10	9 15.5	N	3	
<i>Tethys.</i>				
1885, Dec. 11	10 5.0	S	3	
12	8 53.6	N	3	
28	9 48.2	S	2	Cloudy
1886, Jan. 14	9 30.4	S	3	
15	7 58.0	N	3	
Feb. 1	7 38.5	N	3	Hazy
16	10 1.6	N	3	
17	8 44.4	S	3	Faint; hazy
18	7 26.7	N	—	
Mar. 5	9 43.9	N	2	
6	8 37.4	S	3	
7	7 7.9	N	3	
<i>Dione.</i>				
1885, Dec. 11	9 37.0	S	3	
26	10 43.8	N	2	
1886, Jan. 6	9 16.4	N	2	
Feb. 1	9 5.9	S	3	
16	10 5.6	N	3	
Mar. 10	7 36.3	N	3	
14	10 19.8	S	2	
<i>Rhea.</i>				
1885, Dec. 7	9 27.9	S	3	
16	10 12.8	S	4	
25	10 45.3	S	2	
1886, Feb. 15	8 23.5	N	2	Very unsteady
24	9 14.7	N	3	
Mar. 5	10 2.4	N	3	
14	10 59.0	N	2	

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Satellites of Mars.

Deimos.

Date.	Wash. M.T.	P.	Wt.	Wash. M.T.	S.	Wt.	Remarks.
1886.	h m	°		h m	"		
Mar. 1	10 36.8	112.62	3	10 41.8	47.57	3	Windy; sat. faint
3	9 24.4	299.08	3	9 34.4	44.95	3	Very faint
4	12 12.4	283.05	3	12 20.9	47.75	3	Faint
4	12 31.4	283.58	3	12 38.4	48.19	3	
6	10 35.3	105.88	2	10 42.8	48.58	2	Very faint; sky misty

Comparison with Marth's Ephemeris.

C-O.

		Δp	Δs
Mar.	1	-1.02	+0.05
	3	-1.07	-0.36
	4	-1.47	-1.42
	4	-0.49	-1.14
	6	-0.05	-0.49

Companion of Sirius.

Date.	Sid. Time.	P.	S.	Wt.	Remarks.
	h	°	"		
1886.180	5.5	30.7	7.11	3	Faint
.183	5.5	32.7	7.56	2	Very faint
.194	5.7	32.4	7.11	3	Faint
.202	6.1	33.5	7.75	2	Very faint
.273	8.0	29.5	7.38	2	Faint; 15 inches aperture; double weight
.295	8.6	28.1	7.40	2	Faint; 15 inches aperture; double weight

Mean Result.

	P	S
1886.221	30.56	7.39

Remarks.—The conjunctions of the satellites were observed by placing the wire of the micrometer perpendicular to the major axis of the ring by means of the angle of position given in the *American Ephemeris* for 1886, p. 481. The conjunction of *Mimas* on January 7 was observed by Lieut. W. H. Allen, U.S.N., and that of *Tethys* on February 18 by Mr. G. Anderson.

The satellites of *Mars* were very faint, this opposition being the most unfavourable that will happen between 1877 and 1892. The outer satellite could be observed fairly well, but the inner one was seen only once, and then it was so faint that no measurement was made. It appeared to be near the predicted place. The weather was very unfavourable. The elements of these

satellites are probably nearly correct, but the approaching oppositions will furnish better observations for correcting their motions. The preceding observations have been corrected for differential refraction. The correction for the figure of the planet is not sensible.

The companion of *Sirius* was very faint, and was a difficult object to observe. When the images were blazing it was found that the companion was seen better with the aperture reduced to fifteen inches. The last two observations were made with the smaller aperture, and they have been given double weight.

1886, *May 5.*

Observations of Fabry's Comet (d. 1885). By L. A. Eddie.

The recent abnormally clouded condition of our atmosphere, which has been attended by floods of rain and dense fogs, has prevented earlier observations of this comet, which was discovered on December 1 last by M. Fabry at Paris in the northern heavens, and which reached its perihelion about April 6, soon after which passage it was to reveal itself to star gazers in the southern hemisphere. This visitor was seen here for the first time on May 1, and was observed by myself with optical aid on May 2 from 6.30 to comet-set, about 7.40, when the head sunk below the western horizon. When first seen on this occasion it was about 18° above the western horizon, and was a very conspicuous object, with a head of tolerable brilliancy about $15'$ in diameter, and possessing a broad tail widening out to about $1\frac{1}{2}^\circ$, and traceable to about 9° from the nucleus. It shone with a pale straw-coloured light, and the tail appeared perfectly straight without any sign of curvature, but sharply defined. It was situated in the constellation *Eridanus*, about 3° N.W. of ν *Eridani*, just beneath the well-known constellation *Orion*. The tail stretched upwards to a point about half way between β *Eridani* and η *Orionis*. When viewed through the telescope it revealed a bright and well-condensed nucleus, surrounded by a broad but less luminous coma, and conveyed the impression of a brilliant pellet well sunk in the midst of less luminous gas-jets, emitted by itself from around its periphery, which, after extending towards the Sun for a certain distance, were bent back upon themselves and streamed in the opposite direction, gradually widening out, and thus forming an elongated and truncated cone of extremely rare gaseous matter, with a ball of more condensed matter in its longitudinal axis, and situated at a short distance from the narrow extremity. A very small star, probably about the eighth magnitude, was seen through the coma close behind the nucleus, and another again a little higher up in the tail. The nucleus was eccentrically placed within the coma, and the striæ or hair-like nature of this latter was very